

Two New Species of *Oryctanthus* (Loranthaceae) from Colombia and French Guiana

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ABSTRACT. Two new species of *Oryctanthus* (Griseb.) Eichler (Loranthaceae), *O. grammatus* Kuijt from Colombia (Bolívar) and *O. guianensis* Kuijt from French Guiana, are described and illustrated. Both are characterized by extremely short inflorescences and small leaves and unusual furfuraceous stem surfaces.

Key words: Colombia, French Guiana, IUCN Red List, Loranthaceae, *Oryctanthus*.

The genus *Oryctanthus* (Griseb.) Eichler (Loranthaceae) ranges from southern Mexico to Bolivia and Brazil (Kuijt 1976, 1992), having a single outlier in the Caribbean (Jamaica). It is sharply distinct from other small-flowered, Neotropical genera by the stellate fiber bundles in the leaves (Kuijt, 1961; Kuijt & Lye, 2005), the strap-shaped bracteoles flanking its flowers, and especially in the structure of the pollen grain, which is unique in the family (Feuer & Kuijt, 1985; Fig. 1). The genus was monographed in 1976 (Kuijt, 1976), with a more recent summary and description of an additional species *O. minor* Kuijt, also from French Guiana (Kuijt, 1992, 2009a).

A single specimen of each of two undescribed, small-leaved species was recently encountered during herbarium work at the United States National Herbarium and the Missouri Botanical Garden, and the present contribution describes and illustrates each. Both species are characterized by young stems with a strikingly striped cork pattern. This raises the number of known *Oryctanthus* species to 14.

1. *Oryctanthus grammatus* Kuijt, sp. nov. TYPE: Colombia. Bolívar: lands of Loba, San Martín de Loba & vic., “on mangle,” Apr.–May 1916, *H. M. Curran s.n.* (holotype, US-537561). Figures 2, 3.

Haec species inter congeneros ob internodia juvenilia suberis lineis conspicue grammata atque flores inflorescentiasque minutas insignis, quoad inflorescentiam parvam *Oryctantho minore* Kuijt similis, sed ab eo inflorescentiae forma atque fructu ellipsoideo distinguitur.

Small, percurrent plants, internodes 8–40 mm, when young with 4 broad (often confluent), raised, erumpent lines of pustular, cinnamon-brown cork,

these lines extending down from the petioles, the stems becoming \pm glabrous with age. Leaf blade to 4 \times 2 cm, narrowly obovate to elliptical, apex rounded, base acute, petiole 2–3 mm, distinct, leaf margins and most of the raised abaxial midvein furfuraceous, venation pinnate, the midvein not reaching the apex, stellate fiber bundles evident at least on dry leaves. Inflorescence 1 per leaf axil, no more than 3 mm (excluding fruits), sessile, flowers ca. 6, bisexual, inserted at an angle to the axis; mature buds 1.5 \times 1 mm, apex obtuse; petals 6, nearly isomorphic, stamens biseriate, the shorter ones with a small connectival horn; anthers with 4 thecae; style 2/3 mm long, thick below, narrowing distally, the stigma undifferentiated. Fruits 3 \times 1.5 mm, ellipsoid, apex truncate, calyculus inconspicuous, smooth.

Etymology. The epithet *grammatus* refers to the striped appearance of young internodes.

Distribution and habitat. *Oryctanthus grammatus* is known only from the type, collected nearly a century ago in an area that has been much cultivated. It is therefore conceivable that the species is extinct today.

IUCN Red List category. The new taxon is assessed as DD or Data Deficient, according to IUCN criteria (IUCN, 2001).

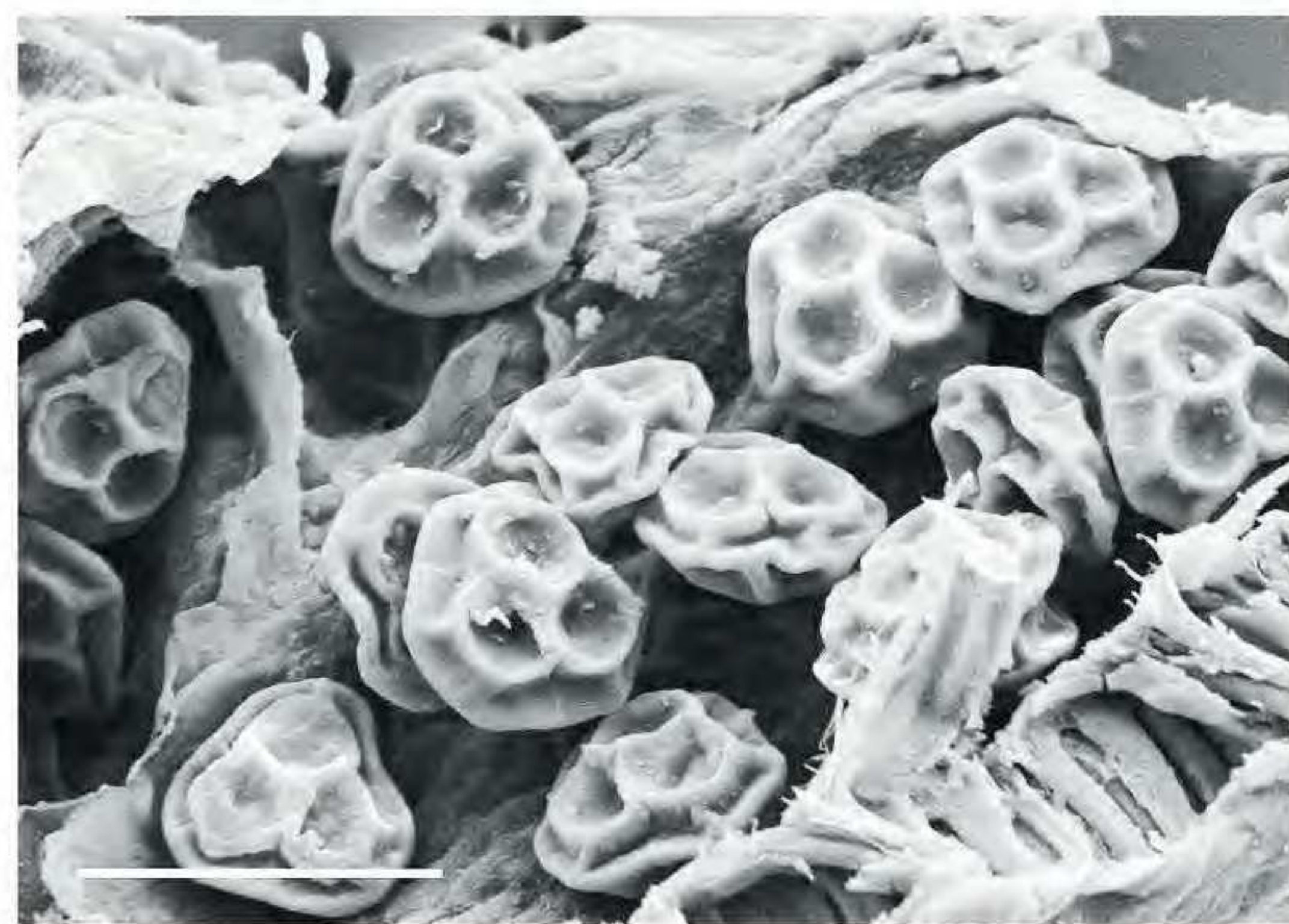


Figure 1. Pollen grains of *Oryctanthus guianensis* Kuijt. Taken from the holotype *Billiet & Jadin 5923* (MO). Scale bar = 50 μ m.

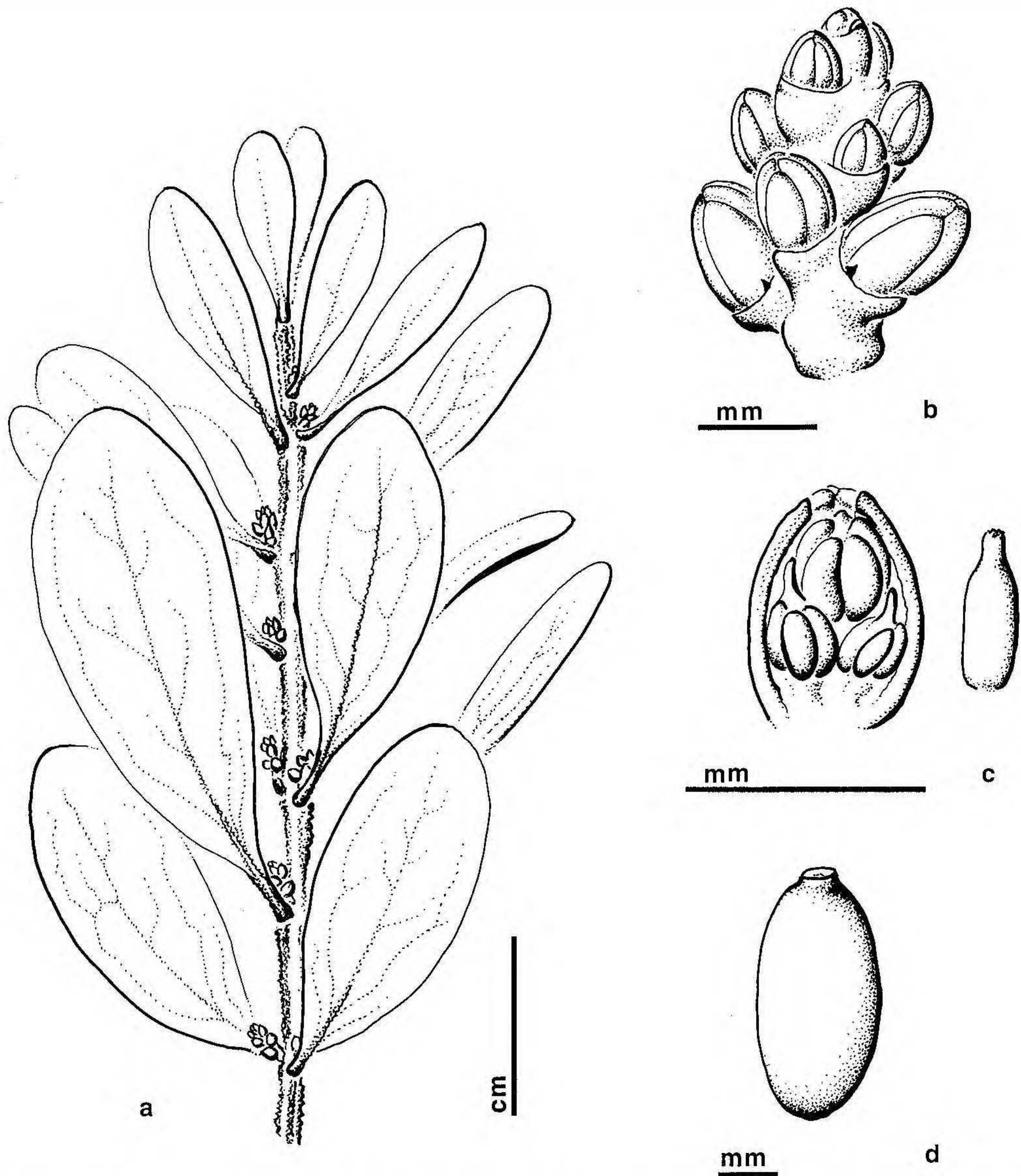


Figure 2. *Oryctanthus grammatus* Kuijt. —A. Flowering shoot. —B. Inflorescence. —C. Dissected bud, showing three petals and their stamens; style on the right. —D. Fruit. Drawn from the holotype *Curran s.n.* (US).

Discussion. *Oryctanthus grammatus* is an inconspicuous but exceedingly distinctive species by its minute inflorescences and flowers and the strikingly striped cork formation on young branches. The formation of similar cork, often in longitudinal lines, is common in many small-flowered, Neotropical genera, but none have the distinctive, striped features of *O. grammatus* (and the other species here described, *O. guianensis*). The recently described *O. minor* from French Guiana (Kuijt, 2009a) has a similarly small inflorescence, but a very different

shape. Most strikingly, the stems of *O. minor* are completely covered with dense cork, and its fruits are depressed-globose.

The accompanying SEM photographs deserve some comments (Fig. 3). The cork stripes are sharply defined, the smooth (probably green when fresh) intervening lines showing numerous transverse or slightly oblique stomata. Enlargement of cork shows that very fine filaments extend outward from most cork cells. Similar filaments have been noted for two species of *Psittacanthus* (Kuijt, 2009b, fig. 1c), in

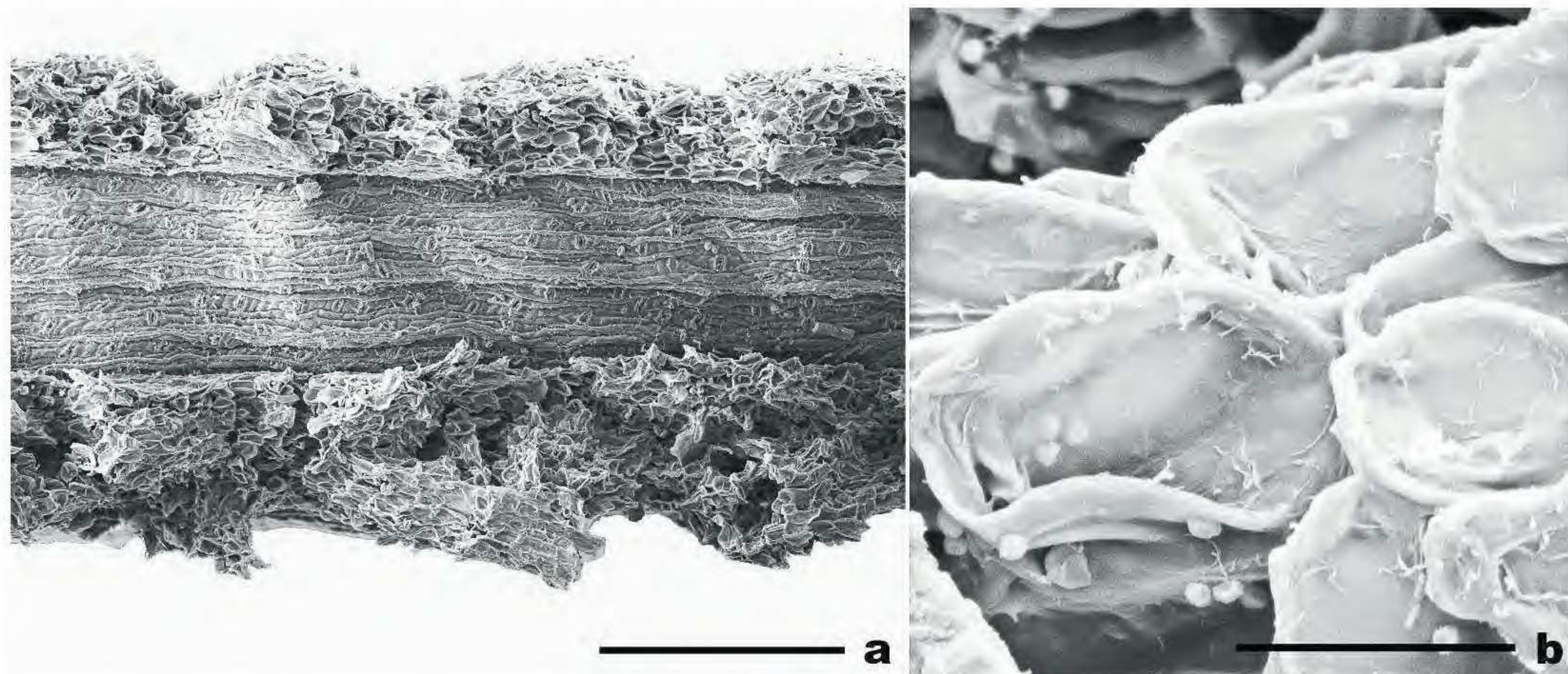


Figure 3. Cork development on *Oryctanthus grammatus* Kuijt. —A. SEM view of the cork stripes on a young stem. —B. Enlargement of collapsed cork cells, showing fine (probably waxy) filaments. The small spherical bodies scattered on the cell surfaces, each with minute prickles not here visible, are extraneous. Taken from the holotype *Curran s.n.* (US).

which the filaments arise from short epidermal hairs. The filaments are believed to represent waxy extrusions. It is not known how common such structures are in other mistletoes.

2. *Oryctanthus guianensis* Kuijt, sp. nov. TYPE: French Guiana. Kourou, garden, 5°10'N, 52°40'W, 5 m, on *Citrus*, 8 Mar. 1993, *F. Billiet & B. Jadin 5923* (holotype, MO; isotype, BR not seen, P not seen). Figures 1, 4.

Haec species quoad foliorum magnitudinem formamque *Oryctantho minore* Kuijt similis, sed ab eo internodiis juvenilibus subere in lineis (nec omnino) ornatis, antherarum connectivis cornu breviora praeditis atque fructu ovoideo-ellipsoideo laevi (nec tuberculato) distinguitur.

Sparsely branched plants, young stems with sharply defined, rough brown cork stripes extending down from the petioles, older stems smooth; internodes to 3.5 cm, strongly quadrangular, becoming nearly carinate distally. Leaf blade to 5 × 2.5 cm, coriaceous, elliptical, apex rounded, base obtuse, petiole 5 mm, distinct; phyllotaxy regularly decussate, leaf margin and abaxial midrib brown-furfuraceous; venation pinnate but obscure; stellate fiber bundles not visible. Inflorescence to 1.5 cm in fruit, but 7–8 mm in early anthesis, peduncle 1–4 mm, followed by 12 or more pairs of sessile flowers in deep axial depressions, subtended by a small leaf scale and flanked by 2 minute, flat bracteoles, the latter largely hidden in the floral cavity. Mature bud 2 mm long, acute or nearly so, nearly perpendicular to the inflorescence axis, bisexual, hexamerous, petals slightly dimorphic; anthers sessile, biseriate, 4-

loculate, with small connectival horn; pollen as typical of the genus, with 3 circular depressions on each face (Fig. 1); ovary 0.5 mm. Fruit 6 × 3 mm, narrowly ovoid-ellipsoid, reddish orange at maturity, calyculus inconspicuous.

Habitat and distribution. *Oryctanthus guianensis* is known only from the type collection.

IUCN Red List category. The new taxon is assessed as DD or Data Deficient, according to IUCN criteria (IUCN, 2001).

Discussion. In terms of leaf size and shape, *Oryctanthus guianensis* appears to compare to the recently published *O. minor*, which is also from French Guiana (Kuijt, 2009a). However, that species has its young internodes completely covered with furfuraceous material, without any signs of striping, and its fruits are depressed-globose and slightly tuberculate, features at variance with *O. guianensis*. The connectival horns of the lower anthers of *O. minor* are also much longer than those of *O. guianensis*. Stellate fiber bundles are not evident on the rather thick, dried leaves of *O. guianensis* (or in *O. minor*), but may be assumed to be present, as they are characteristic of all other known species of *Oryctanthus*.

While the two new species described herein show some similarities, especially in the matter of the striking cork lines on young stems, a glance at the accompanying illustrations at once shows distinctive differences. The leaf blade of *Oryctanthus grammatus* is narrowly obovate to elliptical and has a clearly visible, pinnate venation, being thin. In *O. guianensis*

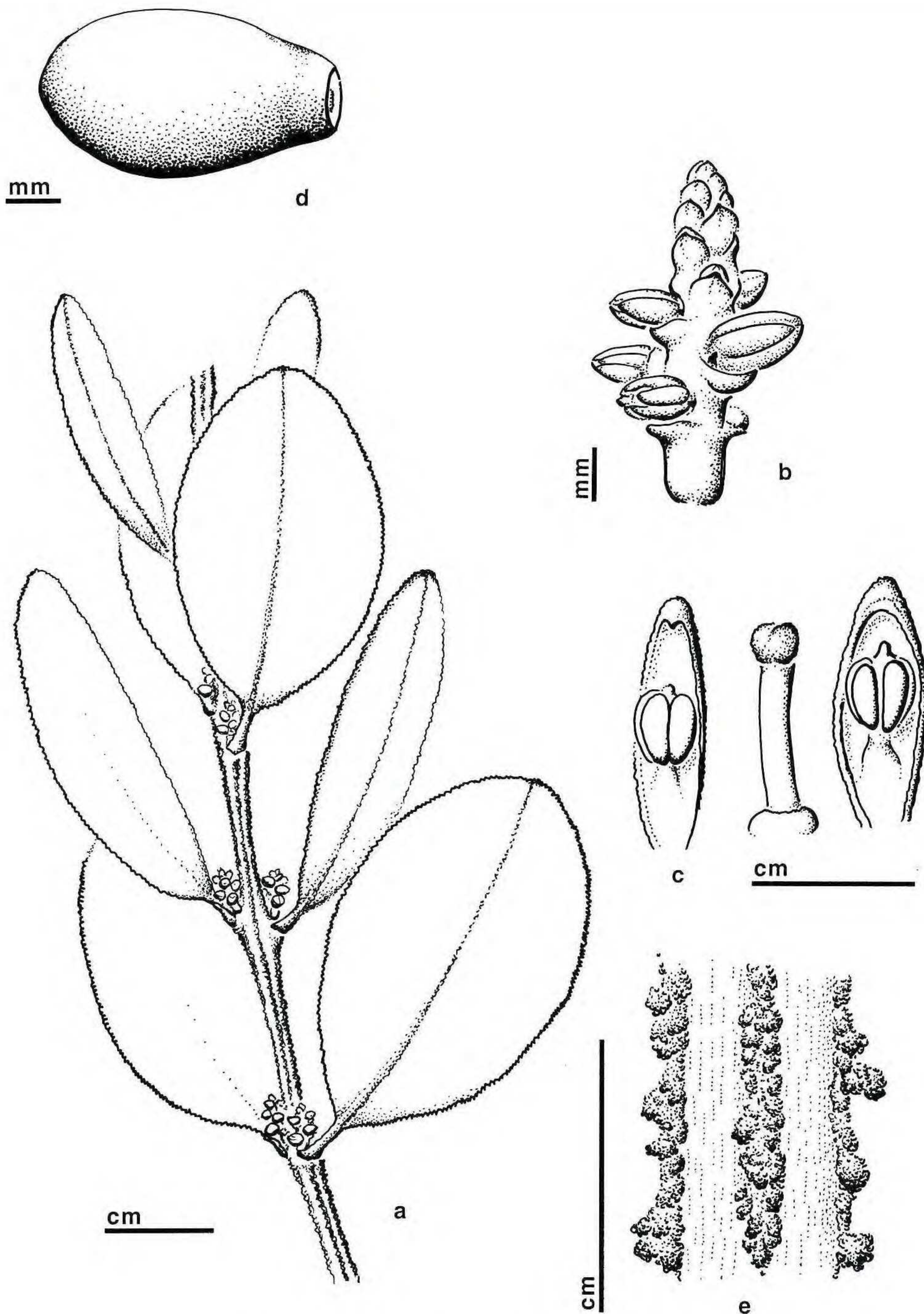


Figure 4. *Oryctanthus guianensis* Kuijt. —A. Habit. —B. Young inflorescence. —C. Floral dissection, showing two stamen-bearing petals and style (middle). —D. Fruit. —E. Enlargement of cork development on a young internode. Drawn from the holotype *Billiet & Jadin 5923* (MO).

the leaf blade is broadly elliptical, without evident venation except for the furfuraceous abaxial midrib that runs into the apex, the blade being coriaceous. The orientation of flowers on the inflorescence axis is

angled in *O. grammatus*, perpendicular in *O. guianensis*, and the inflorescence of the latter becomes much longer (to 15 mm vs. 3 mm), and bears many more flowers than that of the former (24 or more vs. ca.

six). The style of *O. grammatus* is remarkably thick (Fig. 2C), an unusual feature in the genus.

Acknowledgments. The continuing financial support of the Natural Sciences and Engineering Council of Canada is acknowledged. The SEM work was done by Brent Gowen of the University of Victoria, the photographic plates by David Lye. I am obliged to Roy Gereau for preparing the Latin diagnoses.

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